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Irrigation Systems in Rostov Oblast

The first section of the Main Don Irrigation Canal, which is 26 kilometers long, was completed and ready to receive water from the Tsimlyanskaya Reservoir in January 1952.(4) This section will bring Don water near the northern entrance into tunnels now under construction by the Dombonnel'sstroy Trust in a straight line between Voskhod village and Malaya Martynovka village in Rostov Oblast; 3.5 kilometers of one tunnel were completed at the end of 1951 (5) and the boring of the second tunnel has started.(6) Furthermore, 54 kilometers of the Lower Don and 70 kilometers of the Azov distributing canals have also been completed.(7)

It was reported on 3 April that temporary openings were made in the sides of the completed section of the Main Don Irrigation Canal, which has a capacity of 3.5 million cubic meters, to admit water which has accumulated on the low grounds along the canal from the melting snow. It was estimated that in 4 days about 2 million cubic meters of water flowed into the canal through the openings and reached as far as the Lower Don Canal. The water has accumulated on the low-lying lands along the canal in spite of the collectors which had been built under the canal to assure a free passage to it.(8)

When completed, the Veselovskiy Pumping Station will have four pumps and four pipelines to feed water into the Azov Distributing Canal from the Viselovskiy Reservoir. One of the pumps, along with its pipeline, was to be put into operation in March, at the same time that the electric power substation for supplying the pump's motor with power was to be completed.(3)

Altogether, a network of permanent irrigation canals over 3,000 kilometers long, and with an average cross section measuring 1.5-2 meters by 0.8-1 meter, was completed in 1951. The construction of the network involved 14.5 million cubic meters of earthwork.(9) Over 2,000 concrete or reinforced-concrete water-controlling structures are built on the canals. About 1.5 million cubic meters of earthwork, 1,500 concrete structures on the permanent network, and 10,000 smaller concrete structures on the temporary network are to be completed before the spring of 1952.(10)

The work has been mechanized to such an extent that machines performed enough work in one hour to occupy 1,000 manual workers for one week. Toward the end of 1951, the cost of materials and equipment arriving at the sites averaged one million rubles a day.

In the spring of 1952, the first sector of the droughty region in Rostov Oblast, consisting of 100,000 hectares will be irrigated.(9) The sector consists of 65,000 hectares in the Nizhne-Donskoy Massif (Lower Don Massif) (10), including kolkhoz and sovkhoz fields of Semikarakorskiy, Ramanovskiy, and Martynovskiy rayons which will receive water from the Tsimlyanskaya Reservoir via the Main Don and Lower Don Canals.(9) It also consists of 35,000 hectares (10) in Azovskiy, Aksayskiy, Batayskiy, Veselovskiy, and Bagayevskiy rayons which will be irrigated with water from the Veselovskiy Reservoir through the Azov Distributing Canal.(9)

Yuzhgiprovdokhoz has completed preliminary plans and specifications for the second stage of the construction of irrigation systems in Rostov Oblast. The new area to be irrigated lies between the Sal and Manych rivers and covers 100,000 hectares. It also includes some lands which lie in the immediate vicinity of the Main Don Canal, and in the zones of the Bagayevskiy and Sadkovskiy distributing canals.(11)

Irrigation of Stalingrad Oblasts, Trans-Volga Region, and Caspian Lowlands

The plan for supplying water to one million hectares of droughty regions in the southern part of Stalingrad Oblast, which has been prepared by the Oblast

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Water Resources Administration, was approved by the Stalingrad Oblast Executive Committee. The Plan provides for the utilization of some dried-up river beds to supply reservoirs built at their sources with a reversed flow of water from the Tsimlyanskaya Reservoir. Aksay, Myshkovaya Medveditsa and other left tributaries of the Don will be affected; the Medveditsa River will become navigable for 250 kilometers from its estuary.(12)

Since the construction of the Volga-Don Canal and Tsimlyanskaya Reservoir are nearing completion, Stalingradvodstroy construction organization with headquarters in Stalingrad was created by the Ministry of Agriculture USSR to build the remaining irrigation part of the project. The organization will carry out the work in Stalingrad Oblast, Trans-Volga Region, and Caspian Lowlands.

In the southern part of the Stalingrad Oblast, 33 irrigation systems are planned for irrigating 150,000 hectares and for supplying water to 1.2 million hectares. The 156-kilometer-long Ergeninskiy Canal will deliver water to the largest irrigation system, which will supply water to more than 500,000 hectares of steppes. Near the Stalingrad end of the Volga-Don Canal alone, 50 million cubic meters of earth will have to be excavated, 245,000 cubic meters of reinforced concrete placed, and 50 kilometers of pipelines laid.

In 1952, work will commence on the Generalovskaya and Novoakhsayskaya systems, which will receive water from the Tsimlyanskaya Reservoir by means of seven pumping stations.

The plans for the Trans-Volga and Caspian regions are still greater, since 13 million hectares are to be irrigated or supplied with water in Astrakhan, Gur'yev, West Kazakhstan, and Saratov oblasts. The use of 700 excavators, bulldozers, and graders, and more than 300 suction dredges, not counting large scrapers, ditch diggers, and portable electric power plants is planned for the work in the Trans-Volga region alone. At present, construction personnel is being trained for this project. The work in 1952 will be confined to building and organizing auxiliary enterprises for the construction of living space and cultural establishments for the builders.(13)

When built, the reservoir of the Stalingrad GES will supply water to 11 million hectares and irrigate 2 million hectares of land.(14)

It is estimated that the Volga-Ural, or Stalingrad Water Supply Canal, which will also be used for navigation, will take 400 cubic meters of water per second from the Stalingrad GES reservoir.(15) It will feed a network of distributing canals with a total length of 2,000 kilometers, which will branch off southward to supply water to 6 million hectares of cattle-breeding grasslands and irrigate more than one million hectares of arable land. Another canal to the north of, and parallel to the Volga-Ural Canal, which also has its source in the Stalingrad GES Reservoir, will irrigate or supply water to 1.5 million hectares. Since the terrain here is hilly, pumping will have to be widely employed.

On the right bank of the Volga, a large Sarpinskiy Water Supply Canal will be built to irrigate or supply water to several million hectares of the Sarpinskaya lowlands. The dried-up lakes of the region will be filled up again and become a chain of reservoirs linked together with a network of canals. Here also the prevailing topographical configuration of the terrain will require the wide use of pumping.(14)

The Volga-Akhtuba floodlands, one of the largest and most fertile river valleys in the world, extend from Stalingrad to the Caspian Sea. Akhtuba is the left arm of the Volga River which branches off the main stream at a point 41 kilometers above Stalingrad. Buzan, another arm of the Volga, joins the Akhtuba at the Krasnyy Yar. The soil brought down by the river from the black-soil and

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other regions of the USSR and deposited on the floodlands is extremely fertile. However, the valley is usually flooded every spring until May or June to a width of 20 or 30 kilometers, which makes the growing of grain, cotton, and vegetables impossible due to an early frost in the fall.

The Volgoakhtubstroy Trust was organized in Astrakhan Oblast to carry out the systematic reclamation of the fertile lands along the valley and to protect them against floods by building dikes, pumping stations, drains, and other necessary structures. Two stations equipped with various types of machines were organized to assist the Volgoakhtubstroy Trust in its work.

During the last 2 years alone, 26 million rubles, of which 18 million rubles were included in the national budget, were spent on the project. During these 2 years, 8,000 hectares of 24 consolidated kolkhoz lands were diked, 25,000 hectares of kolkhoz lands were irrigated, and 5,000 hectares prepared for irrigation. In 1951 alone, 60 kilometers of dikes and dams, 32 pumping stations, 140 kilometers of permanent canals, and 450 kilometers of temporary feeders were completed. Altogether, over 2 million cubic meters of earthwork were carried out.

A hectare of the irrigated valley land produces one of the following: 73 centners of spring wheat, 500 centners of watermelons, 400 centners of apples, 36 centners of cotton, and 72 centners of rice.(16)

Samgori Water-Supply and Irrigation System

In the Georgian SSR, the upper main canal of the Samgori System and the Tbilisi Reservoir were completed and put into operation on 4 November 1951 when water from the Iori River arrived at the reservoir through the canal.(17)

Samgorvodstroy, the organization in charge of the construction, is now concentrating its efforts on the Lower Main Canal, which is the second stage of the entire project. Excavation has already been completed over the entire length of the canal, while numerous concrete structures, including tunnels, aqueducts, and others, are now under construction.(18)

In 1951, 595 men were trained for 25 different trades within the organization. In 1952, 80 machine operators, 120 concreters, carpenters, and steel reinforcement assemblers, and 30 mechanics-repairmen are being trained. In addition, 450 persons of higher standing will receive special training to improve their qualifications.(19)

Irrigation Projects in Azerbaydzhan SSR

The Verkhne-Karabakhskiy (Upper Karabakh) Canal, which will receive its water from the Mingechaur Reservoir after the latter's completion, together with the Main Murganskiy Canal, will irrigate the lowlands between the Kura and Araks rivers. The Kura-Araksvodstroy Construction Administration is entrusted with the work.(21)

The first section of the Samur-Davichinskiy Canal imeni I. V. Stalin was completed by kolkhoz workers within 6 months in May 1940. Now it is possible to start building a GES on the completed section of the canal to supply cheap electric power to the Siazan' oil fields, local industries, and the kolkhozes of the region.

The second stage of the construction, now under way, includes digging the second section of the canal, involving 10.5 million cubic meters of earthwork, which is ten times more than the work on the first section of the canal. When completed, the 270 kilometer-long canal will bring the waters of the Samur River and the rivers of the Kuba-Khachmas Massif into the waterless steppes of the Apsheiron Peninsula.

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The canal will discharge into the Dzheyran-Batan Lake near Baku. The lake will become a large reservoir of water. The canal will irrigate altogether 118,000 hectares, including 23,000 hectares on the Apsheron Peninsula, on which olive and other fruit trees will be cultivated. Pumping stations will be built at a number of places to carry out the irrigation.

The earthwork has been roughly completed on 30 kilometers of the canal, but the plan for 1951 was not fulfilled because of a shortage of skilled engineers, misuse of equipment, and undisciplined labor.(21)

Excavators, bulldozers, scrapers, graders, dump trucks, portable electric power plants, and other equipment keep arriving at the sites constantly. The plan for 1952 includes reclaiming 70,000 hectares of land.(20)

Irrigation Systems in Central Asia

The organizations listed below were created in connection with the plans for constructing irrigation systems which will depend on the Main Turkmen Canal for water supply:

Turkmenvodstroy, the administration for constructing irrigation systems based on the Main Turkmen Canal, whose chief is V. T. Zakharchenko, has its headquarters in Tashauz, Turkmen SSR. The administration has opened construction and installation offices in Tashauz, Kunya-Urgench, Leninsk, Khodzhehli, and Nukus. It is planned that the administration will gradually increase its activities and complete preliminary work to enable the actual construction work on the irrigation systems near the northern sector of the Main Turkmen Canal to begin in 1953.

Sredazgiprovdokhlopok, a special institute for planning and designing irrigation systems of the Main Turkmen Canal, has its headquarters in Tashkent, Uzbek SSR.

Agrolesproyekt, under the Ministry of Forestry USSR, is responsible for surveying and planning forestation and measures to arrest the movement of shifting sands along the Main Turkmen Canal and the branch distributing canals.

There are regional administrations under the same ministry in Tashanz and Nebit-Dag for carrying out the above work.

Turkmensel'vodproyekt, under the Ministry of Agriculture USSR, and Turkmen-sovkhozrodproyekt, under the Ministry of State Farms USSR, plan and survey water-supply systems on the grazing lands along the Main Turkmen Canal in Kara-Kum.

Karakumsel'vodstroy, under the Ministry of Agriculture USSR, and Turkmen-sovkhozvodstroy, under the Ministry of State Farms USSR, carry out the construction of the above systems.(22)

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